

Salicaria concolor (p. 88) is identified by its first primary as an *Acrocephalus*. The wing-formula puts *A. streperus* and *A. palustris* altogether out of the question, and casts a doubt upon *A. agricola*. The length of the wing and the comparative shortness of the tail (measurements omitted in 'The Ibis,' but fortunately to be found in 'Stray Feathers') dispose of *A. agricola* altogether, and leave us with the conclusion that this bird is *Acrocephalus dumetorum* (Blyth), with a slightly shorter bill than usual ('55).

Salicaria scita. Dresser is probably right in identifying this bird with *Hypolais caligata* (Licht.). In 'Stray Feathers' (iii. p. 426) we learn that the first primary is twice as long as the coverts, that the second primary equals the sixth, and that the beak is small.

Salicaria scitopsis (p. 88). The first primary being twice as long as the coverts marks this bird as a *Hypolais*. The second primary being between the sixth and seventh, the length of wing 2.25, and the culmen .51, all point to *Hypolais caligata* (Licht.), though the dimensions are somewhat smaller than usual. The wing is not rounded enough for *Phylloscopus fuscatus* or its allies.

XV.—*Supplementary Notes on the Ornithology of Heligoland.*

By HENRY SEEBOHM.

Two articles have already appeared in 'The Ibis' on the ornithology of the island of Heligoland. The first was in 1862 (p. 58), and consisted of a translation of a letter by Dr. J. H. Blasius which appeared in 'Naumannia' for 1858. The second article was written by Mr. John Cordeaux, and appeared in 'The Ibis' for 1875 (p. 172).

The information contained in these articles was so startling that an apology is scarcely necessary for adding corroborative testimony to their general accuracy, for correcting a few unimportant errors, and for mentioning some still more recent novelties of special interest.

Mr. Gaetke's work on the birds of Heligoland is making

fair progress; and he has intrusted to me the task of translating it into English and editing it in this country; so that it is to be hoped that within the next twelve months the full details of his observations made during the last five-and-twenty years in this wonderful little island may be before the public.

The authenticity of the Heligoland skins is beyond all possible question. During the time I spent on the island, from the 23rd Sept. to the 18th Oct., I not only saw enough to convince the most sceptical of the *bona fides* of all concerned, but myself shot or saw in the flesh such a variety of birds, that I could almost agree with my friend Mr. Gaetke when he stated that he would willingly exchange his collections of rare birds shot in Heligoland for those which had passed over the island without being shot. It is probable, however, that the latter bear a much smaller proportion to the former in Heligoland than in any other place.

During my short stay on the island I saw quite a little epitome of the Petchora birds—Grey Plover, Little Stint, Sanderling, Snow-Bunting, Shore-Lark, Blue-throated Warbler, &c. We shot two Aquatic Warblers, a Little Bunting (*Emberiza pusilla*), and had four Richard's Pipits brought to us in the flesh. I watched a *Phylloscopus superciliosus* in Mr. Gaetke's garden for some hours, listened to its call-note, and finally shot it. As we breakfasted one morning (2nd Oct.) we identified a Great Grey Shrike as it flew past the window of our room; and a couple of hours afterwards we bought the bird for four groschen.

The list of Heligoland birds is so varied that many ornithologists have doubted its accuracy. The fact is that Heligoland is the only part of the world of which the ornithology has been exhaustively worked. Every little boy on the island is a born and bred ornithologist. Every unfortunate bird which visits the island has to run the gauntlet of about forty guns, to say nothing of scores of blowpipes and catapults. The flight and note of every bird is familiar to every islander. Each bird has its own local name in the Heligoland language. A new bird is instantly detected. The fisherman steers with

a gun by his side; the peasant digs his potatoes with a gun on the turf and a heap of birds on his coat. On an island where there are no cows, and sheep are kept for their milk only, meat is of course very dear, especially as it has to be brought by steamer from Hamburg, one of the dearest cattle-markets on the continent of Europe. Birds therefore naturally form an important article of diet to the Heligolandiers. Every bird which appears is whistled within range with marvellous skill. The common birds are eaten, the rare ones are sold to the bird-stuffer or taken to Mr. Gaetke. Many of the Heligolandiers are clever shots. Long before sunrise the island is bristling with guns; and after dark the netters are busy at their Throstle-bushes; and at midnight the birds commit suicide against the lighthouse. When we consider that this has been going on for a quarter of a century, and that the results have been carefully chronicled for that length of time, the wonder is not that so many species of birds have occurred on Heligoland, but that so many have hitherto escaped detection. This must be accounted for on the theory that, after all, the appearance of birds on Heligoland is only accidental. Under ordinary circumstances a migratory bird does not require to rest on this island. A few hundred miles to a bird on the wing is a trifle in favourable weather. It is only when overtaken by a squall, or driven out of its course by contrary winds, that a bird seeks refuge here. This is obvious after a few weeks' experience. Certain winds and certain weather fill the island with birds. At other times the island is comparatively empty. Each bird has its time of migration; weather has apparently nothing to do with this date; good weather does not apparently hasten the birds to their breeding-haunts, nor bad weather retard their starting. If the suitable conjunction of circumstances occurs during the season of a certain bird's migration, that bird visits the island. If the season goes by without such conjunction, the bird does not visit the island. The period of its migration is over. The migration of this species has taken place at high altitudes, it may be, or by other routes; and it is in vain to look for it until its next season of migration comes round,

when, given the necessary wind and weather, its appearance may be confidently expected.

The period of migration of each species lasts about a month. In spring the males come first, then the females, then last-year birds, and finally the cripples—birds which have lost their toes, birds with half a tail, birds with one mandible abnormally long, or birds with some other defect. Mr. Cordeaux has fallen into an error in saying (*Ibis*, 1875, p. 174) that this holds good both in spring and autumn; in autumn the order of migration is partially reversed. Astounding as the fact is, it is nevertheless true that in autumn the birds of the year are the first to migrate, birds which, of course, have never migrated before. This may account for the number of species which visit our shores and Heligoland in autumn only. It is not to be wondered at that on their first journey, and without a guide, they should stray somewhat out of the direct course.

By long practice the Heligolanders know when to expect an arrival of birds. The 12th Oct. was a very unfavourable day. There were scarcely half a dozen birds on the island. This unfavourable weather had lasted nearly a week. I used to take a constitutional round the island with my gun twice or thrice a day, spending most of the rest of the time in Mr. Gaetke's studio chatting about his birds, visiting regularly Aeuckens the bird-stuffer, to inquire if any one else had had better luck. On the 11th I shot three Shore-Larks. Aeuckens told me that that was a very good sign, that he had often noticed that a few birds always preceded the favourable weather, and that we might expect a change and plenty of birds soon. The next day the west wind slackened a little. In the afternoon it was a calm. In the evening Mr. Gaetke advised me to go to bed early and be up before sunrise, as birds were expected. Accordingly I turned into bed soon after ten. At half past twelve I was awoke with the news that the migration had already begun. Hastily dressing myself, I at once made for the lighthouse. The night was almost pitch dark, but the town was all astir. In every street men with large lanterns and a sort of angler's landing-net were making for the light-

house. As I crossed the potatoe-fields birds were continually getting up at my feet. Arrived at the lighthouse, an intensely interesting sight presented itself. The whole of the zone of light within range of the mirrors was alive with birds coming and going. Nothing else was visible in the darkness of the night but the lantern of the lighthouse vignettted in a drifting sea of birds. From the eastern darkness clouds of birds were continually emerging in an uninterrupted stream ; a few swerved from their course, fluttered for a moment as if dazzled by the light, and then gradually vanished with the rest in the western gloom. Occasionally a bird wheeled round the lighthouse and then passed on ; and occasionally one fluttered against the glass, like a moth against a lamp, tried to perch on the wire netting, and was caught by the lighthouse-man. I should be afraid to hazard a guess as to the hundreds of thousands that must have passed in a couple of hours ; but the stray birds that the lighthouse-man succeeded in securing amounted to nearly three hundred. The scene from the balcony of the lighthouse was equally interesting. In every direction birds were flying like a swarm of bees, and every few seconds one flew against the glass. All the birds seemed to be flying up wind ; and it was only on the lee side of the light that any birds were caught. They were nearly all Skylarks. In the heap captured was one Redstart and one Reed-Bunting. The air was filled with the warbling cry of the Larks ; now and then a Thrush was heard ; and once a Heron screamed as it passed by. The night was starless, and the town was invisible ; but the island looked like the outskirts of a gas-lighted town, being sprinkled over with brilliant lanterns. Many of the Larks alighted on the ground to rest, and allowed the Heligolandiers to pass their nets over them. About 3 o'clock A.M. a heavy thunder-storm came on, with deluges of rain ; a few breaks in the clouds revealed the stars ; and the migration came to an end, or continued above the range of our vision.

But interesting as field-work was on Heligoland, cabinet-work in Mr. Gaetke's studio was still more so. There is probably no more interesting local collection in the world. Mr.

Gaetke was, of course, delighted to have an opportunity of chatting with Mr. Sharpe and myself about his favourite birds, and of telling the story of the capture of each. For some unaccountable reason the German ornithologists seem to have neglected Heligoland; and Englishmen rarely visit the island. Mr. Gaetke takes a justifiable pride in the artistic way in which his birds are mounted—all the work of his own hands; but he nevertheless allowed us to take the rarer birds out of the cases to measure and describe them, though he sometimes winced when we ruffled the feathers in the process, and chaffed us good naturedly as a couple of ornithological detectives.

The following information may be worth recording in the pages of 'The Ibis':—

The bird mentioned in Mr. Cordeaux's paper in 'The Ibis' for 1875 (p. 179, footnote) as a *Hypolais* with a light band across the wing, is *Phylloscopus nitidus* (Blyth). No *Hypolais* nor *Acrocephalus* has a bar across the wing. The species of *Phylloscopi* with a large and *Hypolais*-like bill, and one or two bars across the wing, form a well-marked group or subgenus, to which Blasius gave the name of *Acanthopneuste*. Of the thirteen species included in this group, the absence of a mesial line upon the crown and the peculiarities of the wing-formula restrict the choice to two—*P. nitidus* and *P. viridanus*. The bright green, approaching verdigris-green, of the upper parts, and the delicate lemon-yellow of the underparts, decide the point in favour of the former species. We had Indian skins of both species with us for comparison; and Gaetke, Sharpe, and I all agreed that no doubt whatever remains on the question.

Phylloscopus borealis (Blas.), Ibis, 1875, p. 179, erroneously called *Phyllopneuste javanica* (Horsf.), Ibis, 1862, p. 66, is a well-marked and perfectly undoubted specimen. This species has been found recently by Collett in the breeding-season in the Porsanger fjord, slightly to the east of the North Cape*, and ought, one would think, to occur much more frequently upon Heligoland than it does.

Mr. Gaetke's work will contain particulars of about five-and-

* See P. Z. S. Feb. 6, 1877.

twenty specimens of *Phylloscopus superciliosus* (Gm.) which have been shot on the island. It will also contain irrefutable evidence that *Phylloscopus proregulus* (Pallas) and *P. coronatus* (Temm.) have likewise been shot on the island.

Iduna salicaria, Pall. (Ibis, 1862, p. 66), or *Lusciola caligata* of Cordeaux (Ibis, 1875, p. 179). Blasius is correct in his identification, as the following particulars respecting this specimen will prove:—*Hypolais caligata* (Licht.) ♂, 28th Sept., 1851. Wing 2·35, tail 1·8, culmen ·53, bastard primary ·68. Second primary between the fifth and sixth. Two outside and two centre tail-feathers about ·1 shorter than the longest.

The second specimen mentioned by Mr. Cordeaux (*loc. cit.*) is *Acrocephalus agricola* (Jerdon) ♀, 12th Jan., 1864. Wing 2·05, tail 2, culmen ·5, bastard primary ·4 (very small and pointed, scarcely projecting beyond the outer wing-coverts). Second primary equal to the sixth. Centre tail-feathers longest, the two outside ones being ·35 shorter.

The *Saxicolæ* appear to have been somewhat hastily examined, both by Blasius and Cordeaux. *Saxicola aurita* auctorum (*S. rufescens* (Briss.) of Blasius in Ibis, 1862, p. 70, and *S. albicollis* (Vieill.) of Cordeaux in Ibis, 1875, p. 179) is represented by a male in breeding-plumage, shot 12th May 1860, and a male in autumn plumage, shot 26th Oct. 1851.

Saxicola stapazina, Linn., of Blasius, in Ibis, 1862, p. 70, and *Saxicola stapazina*, Linnæus, of Cordeaux, in Ibis, 1875, p. 179, by which both writers, no doubt, meant *Saxicola stapazina* auctorum, nec Dresser, is not represented in the collection. The two specimens mentioned by Cordeaux are, no doubt, two specimens of *Saxicola deserti*, Rüpp., a male with black throat, in autumn plumage, shot 26th Oct. 1856, and a female without the black throat, also in autumn plumage, shot 4th Oct. 1855. In both these specimens the axillaries are white, with concealed dusky bases, and the black at the end of the tail extends for nearly an inch and a half.

Saxicola leucomela (Pallas) of Cordeaux, Ibis, 1875, p. 179, is a fine male, in full breeding-plumage, of *Saxicola mo-*

rio, Ehr. When the wing is expanded it shows no trace of white.

The example of *Acrocephalus certhiola* (Pallas) agrees exactly with specimens in Lord Tweeddale's collection, except that the under surface is somewhat more streaked, probably a sign of immaturity.

Since Mr. Cordeaux's paper was written a very interesting bird has been added to Gaetke's collection, shot on 22nd June 1875. It is a Goatsucker, exactly identical with Severtzoff's type of *Caprimulgus arenicolor* (Ibis, 1875, p. 491). In the British Museum is a skin from Egypt agreeing both with Severtzoff's and Gaetke's birds in length of wing and proportion of primaries. In Capt. Shelley's collection are skins of *Caprimulgus ægyptius*, Licht. (of which *C. isabellinus*, Temm., is a synonym), considerably smaller than the above-named birds, and slightly varying in the proportion of primaries; but there are also intermediate forms, leading to the inevitable conclusion that *C. ægyptius*, *C. isabellinus*, and *C. arenicolor* are synonyms of one species.

Motacilla vidua, Sundevall, of Cordeaux, Ibis, 1875, p. 180, is incorrectly named. The bird shot 18th May 1866, is an undoubted *M. lugubris*.

Ruticilla mesoleuca (Hempr. et Ehr.). There is a fine male of this bird, shot 12th June 1864, in the collection.

Among the examples of *Lanius excubitor* in Gaetke's studio are two birds which differ from that species in having only one instead of two bars on the wing. The basal portion of the primaries is white; but the secondaries are black or dark brown throughout, except that at the apex they are more or less tipped with white. One bird has no trace of cross-barring on the underparts; but the other bird is slightly barred. These birds appear to agree exactly with Pallas's description of *Lanius major*. In Dresser's collection and in the British Museum are similar skins collected by Robson near Constantinople. Whether this form be really a distinct species I do not pretend to decide. It appears to be intermediate between *L. excubitor* and the American *L. borealis*.

The Red-tailed Shrike, identified by Blasius as *Lanius*

phaenicurus, Pallas (Ibis, 1862, p. 66), appears to belong to an allied species. Lord Tweeddale, in his article on the Rufous-tailed Shrikes (Ibis, 1867, p. 218), suggests that a description of this bird should be published. I give it as follows:—

Length of wing 3·56 inches, tail 2·94, tarsus ·85. The general colour of the upper parts is greyish brown, slightly mottled on the crown of the head, fore neck, the hinder cheeks, and the rump, caused by brown edgings to the feathers, possibly the remains of young plumage. An ill-defined pale line over the eye. All the wing-feathers more or less margined with paler. The primaries conspicuously tipped with paler. The third primary in one wing newly moulted, and showing the white spot at the base. Tail pale rufous. Underparts whitish. Some of the wing-coverts tipped with rufous, all with a narrow subterminal line of brown. The second primary is ·08 shorter than the sixth. The tail is even, except that the two outside feathers are ·4 shorter than the rest.

After hearing the result of Mr. Gaetke's examination of the rufous-tailed Shrikes in the Berlin Museum, and looking over the skins in the British Museum and in Dresser's collection, and collating the information given in 'The Ibis,' 1867, p. 224 (Walden), 'Stray Feathers,' 1873, p. 174 (Hume), 'Eastern Persia,' ii. p. 140 (Blanford), and 'Ibis,' 1876, p. 187 (Severtzoff), I submit that the Heligoland bird is *Lanius isabellinus*, Hempr. & Ehr. (1828) = *L. arenarius*, Blyth (1846), = *L. phaenicuroides*, Sev. (1876).

The specimens of *Turdus varius* (White's Thrush) are in such perfect plumage, and so artistically mounted, that, in spite of the commandment, it makes one quite covetous to look at them.

The example of *Turdus ruficollis* agrees exactly in measurements with skins of that species from Lake Baical in Dresser's collection. It is an immature bird. The tail is olive-brown, with a rufous cast, especially on the outermost feathers. The shafts of all the tail-feathers are reddish. The under wing-coverts and axillaries are light orange buff.

The skin of *Turdus swainsoni* is somewhat less yellow on

the throat than the skins of this species in Dresser's collection, which he kindly allowed me to take to Heligoland for comparison; otherwise it agrees exactly.

Amongst the immature specimens of *Carpodacus* Mr. Sharpe identified both *C. roseus* and *C. erythrinus*.

Of the American species in the collection the two examples of *Anthus ludovicianus* agree exactly with American skins. The specimen of *Dendroica virens* is in very perfect plumage, and does not show any signs of having been in captivity. A specimen of the American Rice-Bunting (*Dolichonyx oryzivorus*) was also shot on the island; but the wings and tail are so much broken that there is every probability of its having escaped from a cage.

There is one example of *Charadrius virginicus*, and three of *Charadrius longipes*, in the collection. The two species seem to be very distinct. In both the axillaries are ashy grey. In *C. longipes* the wing measures 6·2 inches, the tail 2·4, the tarsus 1·7, end of secondaries to end of wing ·44; the secondaries reach within ·12 of the end of the third primary; and the first and second primaries are of equal length. In *C. virginicus* the wing measures 7·6, the tail 2·7, the tarsus 1·8, end of secondaries to end of wing 1·85; the secondaries reach to the end of the fifth primary; and the first primary is ·3 longer than the second.

Of the two specimens of *Eudromias asiaticus* one is adult and the other young. In both birds the axillaries are pure white.

There are several other birds which there is every reason to believe have been seen on Heligoland—for example, *Emberiza luteola*, *Parus kamschatkensis*, *Phylloscopus fuscatus*, *Phylloscopus tristis*, &c.

The records of the appearance of these birds will find a fitting place in Mr. Gaetke's book. The evidence of a marine artist, trained to catch a fleeting effect of form and colour and fix it in his memory, to be transferred to canvas, is of an entirely different rank to that of the ordinary sportsman or collector; but in an article for a severely scientific journal it will be wisest to content ourselves with quoting the witticism of the "Old Bushman":—*What is hit is history; what is missed is mystery.*